

RANCHO SANTA ANA BOTANIC GARDEN
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HEUCHERA MAXIMA
ISLAND ALUM-ROOT

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RANCHO SANTA ANA BOTANIC GARDEN
of the
NATIVE PLANTS OF CALIFORNIA
Santa Ana Cañon, Orange County, California
Established 1927 in Memory of
JOHN W. BIXBY

HEUCHERA MAXIMA
ISLAND ALUM-ROOT

Vigorous evergreen perennial, arising from a thickened rootstalk, foliage forming a clump 12-24 in. across. Old plants have one to several stems 1 in. thick and over 1 ft. long, thickly clothed with clasping bases of living and dead leaves. Leaves alternate, with a broad, clasping, often reddish, stipular base about 1 in. across, free ends about $\frac{1}{4}$ in. long, ciliate-margined; petioles 6-10 in. long, lightly covered with soft, glandular hairs; blades 4-8 in. across, orbicular, basal sinus 1-1 $\frac{1}{2}$ in. deep, often nearly closed, margins with 8-10, irregular, main lobes, which in turn are divided into irregular crenate teeth with ciliate margins; upper surface of blade dark green, shiny, glabrous; lower surface light green with hairs confined essentially to the conspicuous veins; leaves often brilliant red in age. Flowers borne in narrow elongated panicles 18-30 in. long, lower portion with leaf-like bracts, upper portion with coarsely cut, delicate bracts mostly less than $\frac{1}{2}$ in. long; external flower parts and panicle glandular-hairy. Flowers often 300 in a panicle, borne on short, drooping pedicels less than $\frac{1}{4}$ in. long. Flowers greenish-white, creamy-white or rose-tinged (when in partial sun), about 3/16 in. high; basal portion or hypanthium somewhat campanulate; sepals 5, about $\frac{1}{8}$ in. high, with somewhat rounded, greenish tips and densely glandular-hairy surfaces and ciliate margins; petals 5, alternate with sepals, claw linear, blade lanceolate, but usually coiled (when straightened, about twice as long as free portion of the sepals); stamens 5, exserted, attached at base of sepals, anthers 2-celled, opening by slits; ovary with 2 linear styles, developing into an inferior, 1-celled capsule, with splits from top along margins of the 2 beaks, permitting the numerous, small, black seeds to be shed gradually. Flowers March and April; seeds mature in May and June.

The genus *Heuchera* (after J. H. Heucher, 1677-1747, professor of medicine and botany at Wittenburg, Germany) consists of 25-30 species of North America (one author recognized over 70 species). *H. sanguinea* (Coral-Bells) of southern Arizona, New Mexico and northern Mexico is cultivated for its red flowers. The roots of *H. americana* of the eastern United States and Canada have astringent properties, hence the common name of Alum-Root, also used for other species of the genus. California has about 7 species found from the coastal woodlands to mountain peaks over 10,000 ft. in elevation.

Heuchera maxima (specific name is Latin for largest) was described in 1886 by Prof. E. L. Greene, famous California botanist, 1842-1915, who collected it on the north side of Santa Cruz Island. *H. hemisphaerica*, from the Santa Lucia Mts., and *H. pilosella*, from near San Luis Obispo, were described in 1905 by P. A. Rydberg. Prof. Jepson (*Flora of California* 2: 136. 1936) considered both of these as synonymous with *H. maxima*. We have not yet seen these two forms in the wild,

and so, for the purpose of this discussion, consider *H. maxima* as a strictly insular species native to Santa Cruz, Santa Rosa and Anacapa Islands.

In March, 1932, along with Mr. Ralph Hoffman (late Director of the Santa Barbara Museum, who was killed while exploring for plants on San Miguel Island) we botanized on Santa Cruz Island, during which time we hiked to nearly every part of the island. We only saw *H. maxima* on its north side, where it grew on the nearly vertical rocky cliffs. We found it in full bloom on March 26th between Orizaba Cañon and Baby's Cove. Those plants, with their mounds of rich green leaves and long, graceful panicles of creamy-white flowers, were among the most attractive of all the plants we saw on our trip.

We are indebted to Mr. M. Van Rensselaer, Director of the Santa Barbara Botanic Garden, for our first seeds of *H. maxima*, which he sent us in 1938. These were collected in the Santa Barbara Garden from plants grown there, from seeds originally obtained on Santa Cruz Island.

Propagation of *H. maxima* is readily accomplished from seeds planted in the fall or early spring in a well prepared flat and lightly covered. Screened sphagnum mixed with an equal portion of sandy loam provides a good base. After the seeds are planted, a little finely screened sphagnum should be sifted over the surface. If the flat is then partially immersed in water until the soil is thoroughly soaked, and is then covered with a pane of glass, the seeds will generally germinate without additional watering. As soon as the seedlings are large enough to handle they should be transferred to containers until large enough to set out.

Under our conditions, the plants of *H. maxima* have done well on a loamy north hillside in the shade of shrubs and also under a planting of Santa Cruz Island Pines. Plants now several years old have made mounds of dark green nearly 2 ft. across, and have regularly produced a dozen or two flower stalks 18-30 in. high. Our plants have been watered during the summer but the soil has not been kept wet. This species has also been tried out in several private gardens where it has been successful in shady situations with frequent irrigations. After several seasons the plants become rangy and should be cut back or replaced. We have not attempted to grow it by divisions, but suspect that it would be as easily handled as the well-known garden Coral-Bells. We think that it will thrive in shade or partial shade in any of the coastal areas of California, but do not recommend it for the hot and dry climate of the interior sections.

In addition to the fine green and sometimes red foliage effects which *H. maxima* creates in the shady garden, its long flower stalks are highly attractive. These are also useful as a filler for bouquets because of their gracefulness, their neutral or delicate colorings, and also because they are available for such a long period in the spring.

CARL B. WOLF

RANCHO SANTA ANA BOTANIC GARDEN

Dedication of Garden Foundation to the Board of Trustees for the Rancho Santa Ana Botanic Garden of the Native Plants of California:

"THE NATURE, OBJECT AND PURPOSE OF THE INSTITUTION
HEREBY FOUNDED AND TO BE MAINTAINED HEREUNDER.

ITS NATURE: A botanic garden of the native plants of California, herbarium and botanical library, containing living and/or preserved specimens of trees, plants and flowers native to California, and literature relating thereto.

ITS OBJECT: The preservation and improvement of the property now transferred and such property as may hereafter be transferred to the Trustees for those who not only wish to enjoy, but to study, assembled in one accessible locality, native California plants; and for the advancement of science and education with reference to plant life indigenous to the State of California.

ITS PURPOSES: (a) An institution founded primarily for scientific research in the field of local botany.

(b) To preserve the native California flora, try to replenish the depleted supply of some of the rarest plants which are rapidly being exterminated, and bring together in a comparatively small area as complete a collection of the rich store of native California plants as can be grown in this southern section of the state, thereby promoting the general welfare of the people of the state by providing the means for encouraging and carrying on the above mentioned activities in said state and by doing such other things as may be necessary and desirable to carry out the objects hereof."

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